

Monthly Magazine

March

Biology

By: Claire Lin

What is Biology?

Hi! Have you ever wondered about this thing called biology? What even is it? Well, let me explain! Biology is, in short, the study of life. Biology is a natural science that studies living organisms and contains many subfields, surrounding topics such as genetics, cells, living organisms, ecology, botany, and evolution.

Genetics includes things like DNA (Deoxyribose Nucleic Acid) and bacteria. DNA is your genetic code making up all your traits such as your eyes, hair, and face. So for instance, if one of your parents has brown eyes, then there is a chance that you will have brown eyes too! This is all because of genes and DNA.

Another category of biology is Cell Biology. Cell Biology studies the structure and function of cells. Cells are the basic units of life because they are in all living things, such as plants and animals.

Next, the science of organisms is called taxonomy, which is also under the category of biology. Organisms are all living things, such as animals, plants, you, and me! In order to be considered an organism, you need to have DNA, movement, the ability to get energy, and reproduce.

Ecology is the study of how living organisms interact with their physical environment. Ecologists will often study factors in an environment such as climate, soil, and water to understand how ecosystems work and how living organisms behave in certain conditions.

Another category is botany, which is the study of plants. Everything that there is to know about plants is covered in botany, where botanists study how plants grow, function, evolve, and most importantly, how they are used by humans.

Lastly, evolution is how the population of organisms changes over time. Evolution is the reason for diversities and similarities in living things on Earth. An example of

evolution is human evolution, in which humans evolved from apes over the course of six million years.

As you can see, biology consists of many categories, so it's not just specific to one thing! Biology has various fields that cover many subjects due to the great amount of life on Earth. That is what makes it interesting to study! Topics like botany cover plants, ecology is about environments, and genetics contains the reasons for why humans look the way they do! They all relate to the study of life, which surrounds us every day, making it worth learning about!

The Latest News!

Recently, based on an article published on February 19th, 2025, scientists have created a new Artificial Intelligence Biology Model called Evo-2. The new Evo-2 model has been created so that it can generate DNA sequences on demand. Evo-2 can generate a full set of DNA from literally nothing, and can help interpret mysterious DNA sequences, especially of those that may be connected to diseases and illnesses. This new model, if successful, will be used to make protein designs become full genome designs, meaning that it will make genome engineering faster and more accurate.

Fun Facts!

Biology doesn't have to be boring! In fact, there are probably a ton of interesting things that you don't know about biology, so take some time to read a list of fun facts below!

- The human brain uses about 20% of the body's energy
- The brain is made up of about 100 billion neurons—neurons are nerve cells that tell your body what to do (eating, walking, drinking, etc)
- The heart beats about 100,000 times a day
- Bacteria are the oldest form of life on Earth dating back to around 3.5 billion years ago
- The human body has over 1 trillion cells
- The information stored in the DNA of a single human cell could fill a million-page book
- Butterflies taste with their feet because their taste sensors are located on the bottom of their feet

- There is about an estimated 8.7 million species of plants and animals on Earth but scientists believe this number can be higher because we haven't discovered all the species
- Fingerprints will always grow back in their original pattern even if damaged
- Your intestines are about 25 feet long in total
- Animals are the only living things with a complex nervous system
- The average person has about 25,000 taste buds

History

Biology itself was invented back in 284-322 BC by a person named Aristotle. Aristotle was a philosopher and was called "Father of Zoology"—a branch of biology. Biologists study specific areas of biology, which is split into two sections: The Scale of Life and Types of Organisms. The Scale of Life surrounds biological things, while Types of Organisms surround things like plants, animals, and microorganisms. Biology began mostly in the 19th century, coming from Greek natural philosophy and originating back in Ancient Egypt.

What Does this Have to Do With Me?

You may be wondering, "okay, so what role does biology play in my life? Why should I care?" Well, not only is biology interesting and beneficial to your knowledge, it also has a major positive impact on our world! Such impacts include microbes, the study of tiny living organisms, biotechnology, the science of using living things to create technology, medicine, environmental science, how humans interact with the environment, and gene therapy, to name a few. Biology helps you really *understand* the

world around you, and can improve your quality of life. For instance, biotechnology has been used to modify crops so that they are immune to diseases, and gene therapy has had the ability to create personalized medicines that can help save lives.

As for yourself, have you ever thought about biology as a career path? Being a biologist allows you to do so many amazing things. Biology has many fields to choose from, like ecology, zoology, biochemistry, marine biology, cell biology, and botany, so don't feel limited to the possibilities! There are many choices waiting to be made. Becoming a biologist opens up opportunities for you to do lab work, join agencies to study nature and complete services, or even assess the environment with a firm! Biology can lead you to great things in life, but YOU are going to have to make the choice to start learning.